

Work Order ID 69617

Thursday, May 12, 2011 3:36:07 PM



Page 1

Item ID: D3560-044

Revision ID:

Item Name: Arm Weldment

Start Date: 5/12/2011 Start Qty: 2.00

Required Date: 5/24/2011 Req'd Qty: 2.00

Reference:

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Run Start



Stop



Approvals:

Process Plan:

Date: 11-05-12 Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3560

Rev D

Outg Rev

100



Bandsaw

Jeaspa Bandsaw

BAND SAW

Memo

Cut blanks 15.500" long

0.00

0.00

anf 11/05/31

2

110



HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

1- Mill as per Folio FA696 Rev: *AA* & Dwg D3560 Rev: *D*
2-C'sink 0.196" hole on manual mill as per dwg D3560
3-Deburr per dwg D3560

0.00

0.00

B.A 11/06/02

7

120



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.00

B.A 11/06/02

7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D 3560-044 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: <u>69617</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11.06.02	100	Thickness of material is 0.485 instead of 0.500.	CP 11.06.02 DS/012	Acceptable. PER DR-D412-630-2 Appendix A, "I" values 11/06/02 are still above previous design values	B.A 11/06/02	amr 11/06/03	CP 11.06.02 DS/042	S 11/06/03

NOTE: Date & initial all entries

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Item ID: D3560-044

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Start Date: 5/12/2011 Start Qty: 2.00

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Customer:



Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130  QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00		<i>ent 11/06/03</i>		<u>7</u>	<u>0</u>		
140  Large Fab Large Fab	Large Fab Memo 1-Weld assembly as per dwg D3560 STEP: 1- clean material (buff bracket and bottom of arm with blue pad) 2- set up bracket and arm on jig 3- preheat bracket and arm with torch 4- clean before welding with brush 5- set up machine to 135 amps 6- weld across bottom and top ends 7- reheat with torch (65 deg C) 8- on one side weld from bottom to top half way 9- same for other side (half way) 10- from half way point weld the rest of the first side (ease off pedal near end) 11- same for remaining side (ease off pedal near end)	0.00 0.00		<i>R 11:06-06</i>		<u>7</u>	<u>0</u>		

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Item ID: D3560-044

Accept



Setup Start



Revision ID:

Stop



Item Name: Arm Weldment

Start Date: 5/12/2011 Start Qty: 2.00



Cust Item ID:

Required Date: 5/24/2011 Req'd Qty: 2.00

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8 11/06/08

7 0

2044

160

QC9- Inspect visual per QSI004- Fusion Welds

0.00



QC

Memo

0.00

Quality Control

7 0 BE 11/06/07

170

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

12 11.06.08

7 0

W/O:		WORK ORDER CHANGES					
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Setup Start

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Start Date: 5/12/2011 Start Qty: 2.00

Cust Item ID:

Required Date: 5/24/2011 Req'd Qty: 2.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

8 0 21 4/06/09

190

Small Fab

0.00



Small Fab

Memo

0.00

Small Fab

1-Press bushing in D3560 arm per dwg D3562

8 5 11/06/09 7

200

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

S 11/06/09

27

-044

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries



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Item Name: Arm Weldment
Start Date: 5/12/2011 Start Qty: 2.00  Cust Item ID:
Required Date: 5/24/2011 Req'd Qty: 2.00  Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start 
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210  Packaging	Identify as per dwg & Stock Location: <i>WA</i>	0.00							
Packaging	Memo *** STOCK IN STEP CELL***	0.00							
220  QC	QC21- Final Inspection - Work Order Release	0.00							
Quality Control	Memo	0.00							

ME
11-06-09

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

Picklist Print

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Page 1
T

Work Order ID: 69617

Parent Item: D3560-044

Parent Item Name: Arm Weldment



Start Date: 5/12/2011

Required Date: 5/24/2011

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A New Issue 07.05.24 EC
IPP Rev B ECN 987 07.10.09 EC verified by DD
IPP Rev:C ECN1048 07-12-18 DD verified by: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2808 Bushing		Manufactured	No			100	Each	11.0000	1	2			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				11					
					32896			2					
					46738			9					
M6061T6B0.500X05.00 0		Purchased	No			140	f	16.0000	1.295	2.726316			
 6061-T6 Bar .500 x 5.00				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				MAT004				16					
				112154				16					
D3592-1 Plate		Manufactured	No			190	Each	75.0000	1	2			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA002				75					
					47015			27					
					48517			48					

Handwritten notes:
 4/24/09
 117798
 9.065
 11.06.06
 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	69617
Description: Arm		Part Number:	D3560-4
Inspection Dwg: D3560	Rev: D	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.507	+0.000/-0.001	Ø0.5065	✓		Mic	GA-03
Ø0.196	+0.005/-0.001	Ø0.199	✓		Vern	GA-01
Ø1.000	+0.010/-0.001	Ø1.004	✓		"	"
Ø0.900	+0.010/-0.001	Ø0.902	✓		"	"
0.500	+/-0.010	0.485			"	"
0.250	+/-0.010	0.251	✓		"	"
0.275	+/-0.010	0.275	✓		"	"
0.188	+/-0.010	0.188	✓		"	"
1.750	+/-0.010	1.750	✓		"	"
1.702	+/-0.010	1.702	✓		"	"
Ø0.385 x 100°	+/-0.010 x 0.5°	Ø0.385 x 100°	—		"	"
0.250 Deep	+/-0.010	0.248	✓		"	"

Measured by:	DA	Audited by:	ml	Prototype Approval:	N/A
Date:	11/06/02	Date:	11/06/03	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	07.01.17	New Issue	KJ/JLM	
B	07.06.13	Dimensions updated per Dwg Rev B	KJ/JLM	
C	10.02.02	Dimensions updated per Dwg Rev C	KJ	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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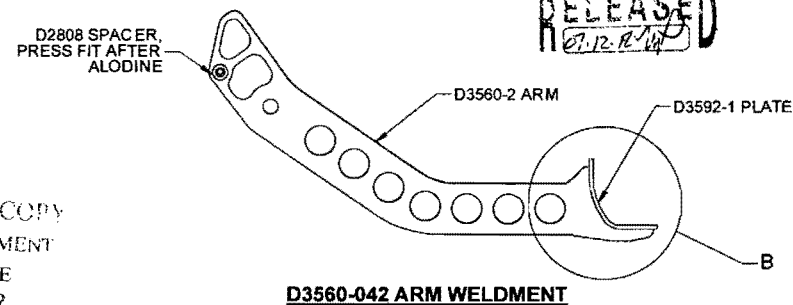
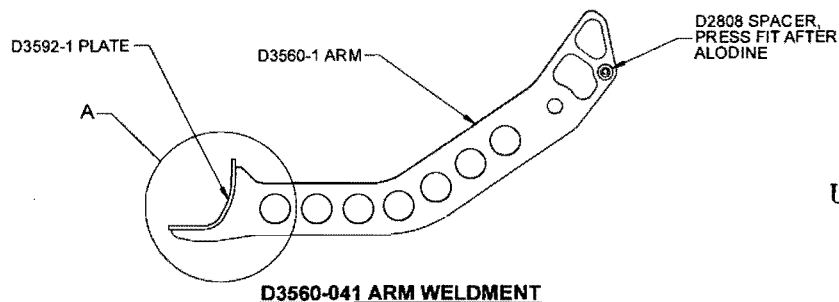
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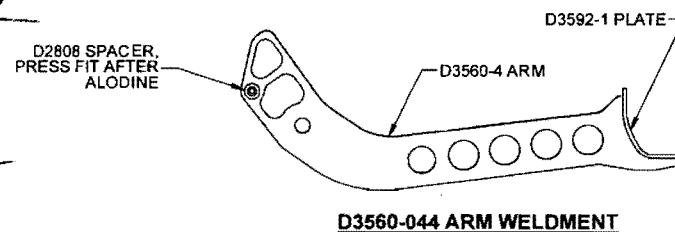
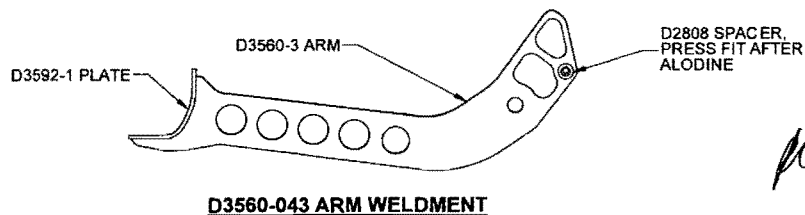
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

RELEASED
7.12.16



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 64617



11-05-12

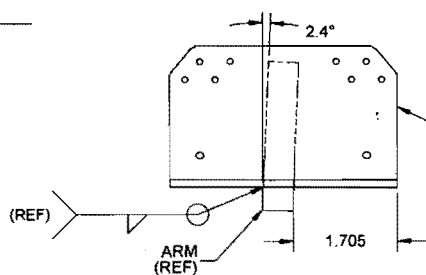
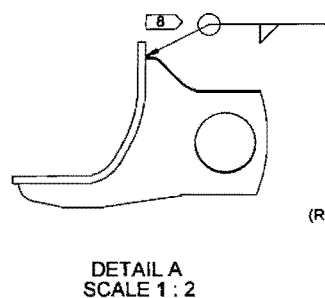
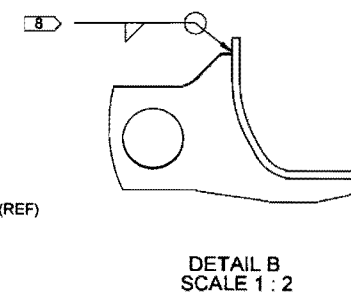
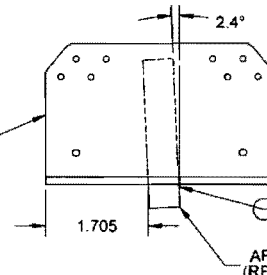


PLATE (REF)



PARTS LIST

QTY -041	QTY -042	QTY -043	QTY -044	P/N	DESCRIPTION
X				D3560-041	ARM WELDMENT
	X			D3560-042	ARM WELDMENT
		X		D3560-043	ARM WELDMENT
			X	D3560-044	ARM WELDMENT
1	1	1	1	D2808	SPACER
1				D3560-1	ARM
	1			D3560-2	ARM
		1		D3560-3	ARM
			1	D3560-4	ARM
1	1	1	1	D3592-1	PLATE

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 1.23 lbs (TYP)
 - 8) WELDING: PER DART QSI 004

DESIGN	ADD D2808 PRESS FIT NOTE; REDRAWN IN SOLIDWORKS	DC	07.11.16
DRAWN	REMOVE POWDER COAT	CP	07.06.19
CHECKED	REDESIGN AS WELDMENT, ADD POCKETS	CP	07.01.15
MFG. APPR.	NEW ISSUE	CP	06.09.25
APPROVED		BY	DATE
DE APPR.			
DATE	07.11.16		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D3560	REV. D
TITLE ARM WELDMENT	SCALE 1:4
COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

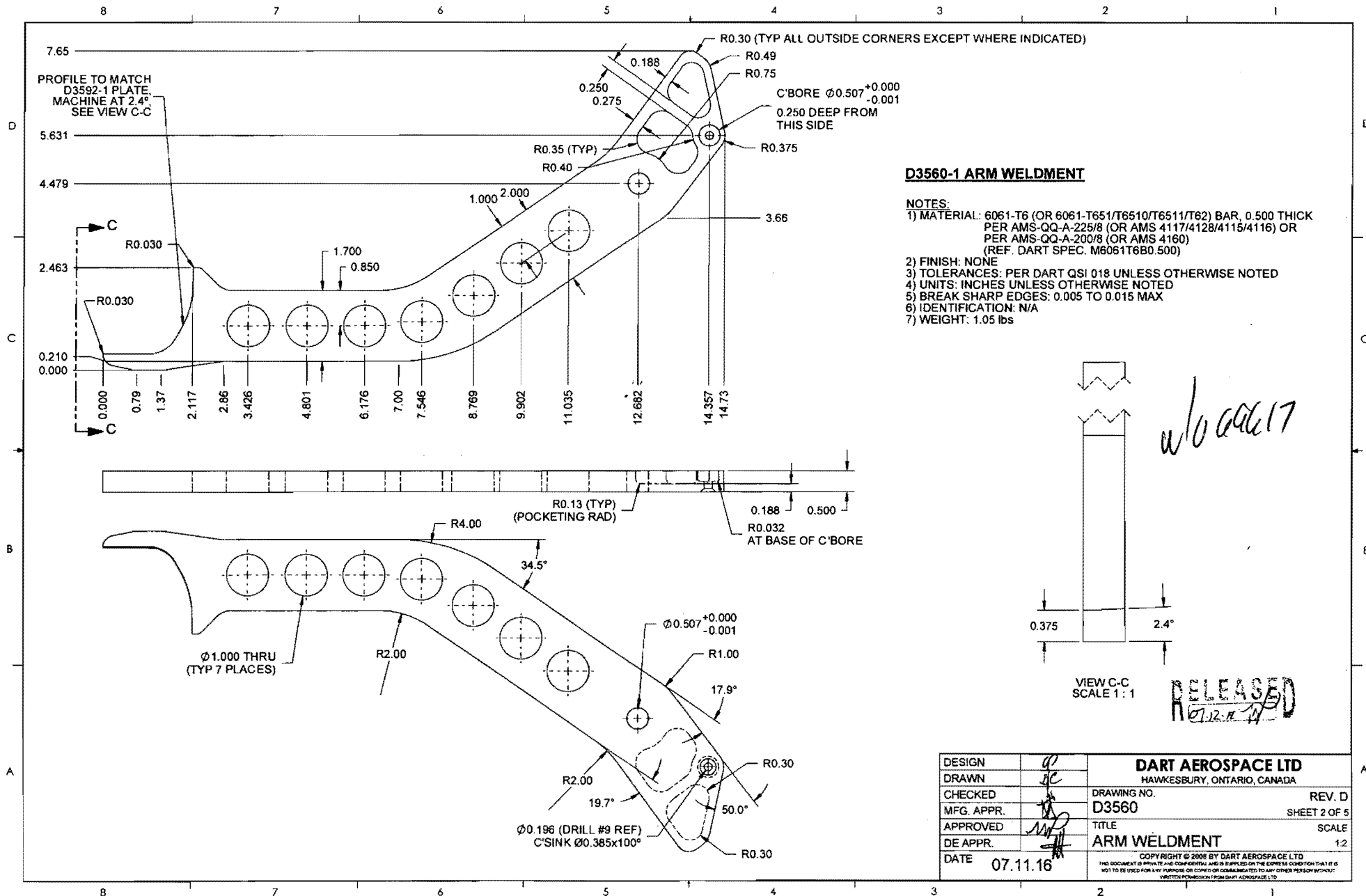
W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

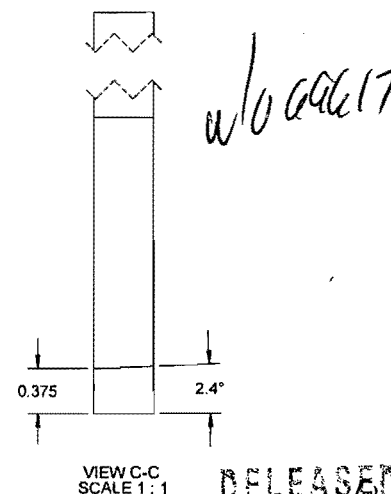
NOTE: Date & initial all entries



D3560-1 ARM WELDMENT

NOTES:

- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR, 0.500 THICK
 PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
 PER AMS-QQ-A-200/8 (OR AMS 4160)
 (REF. DART SPEC. M6061T6B0.500)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.05 lbs



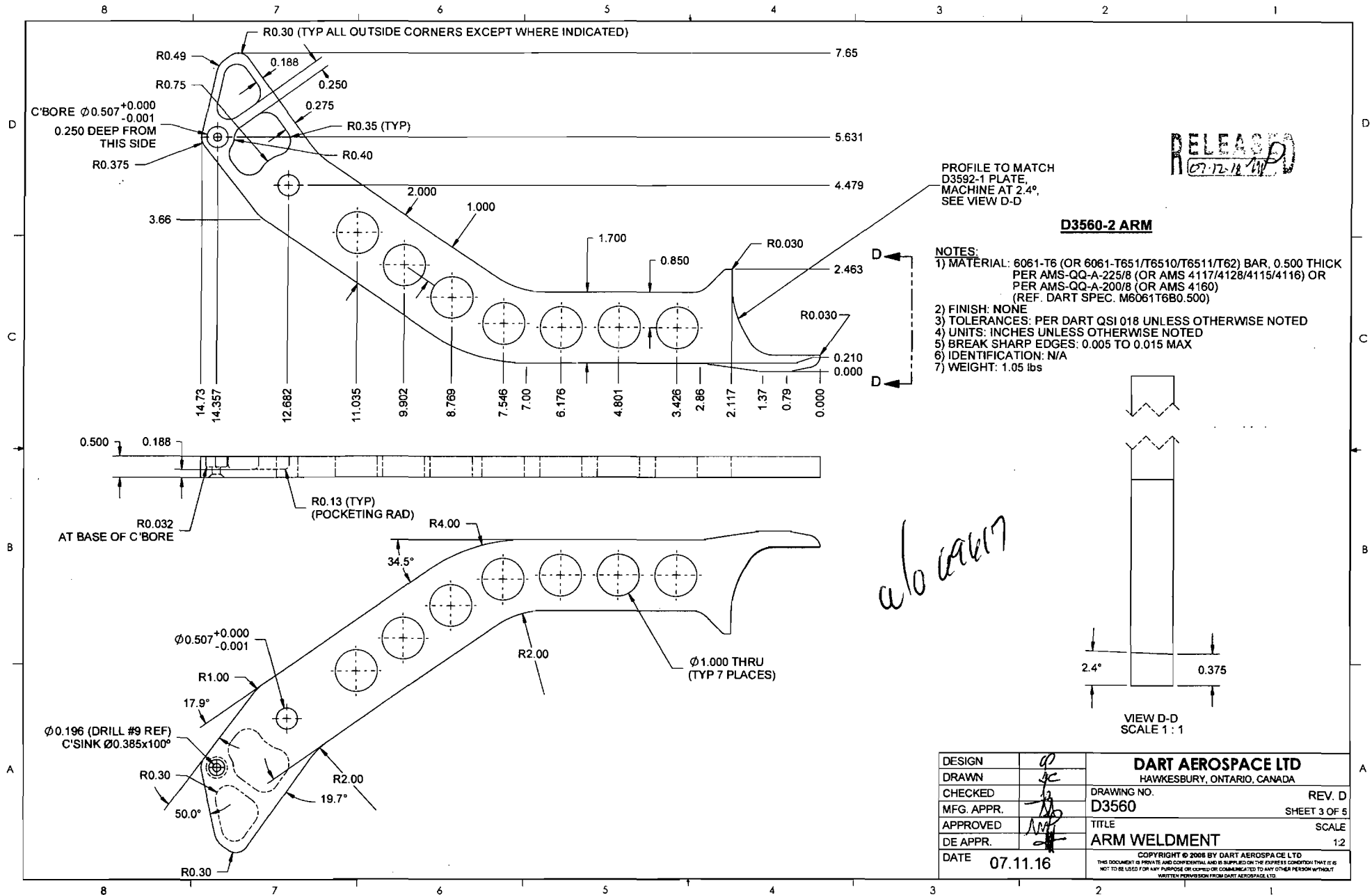
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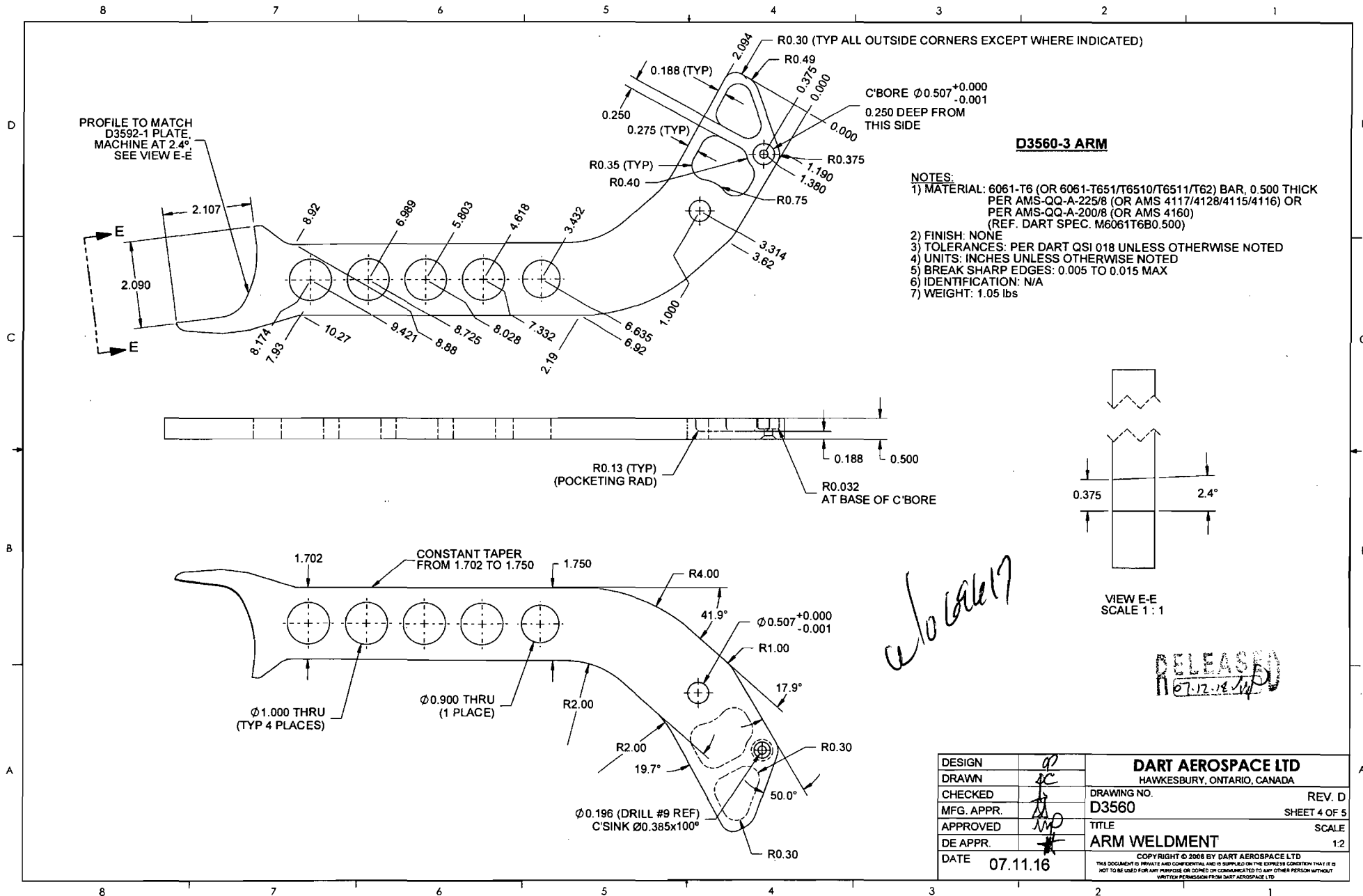
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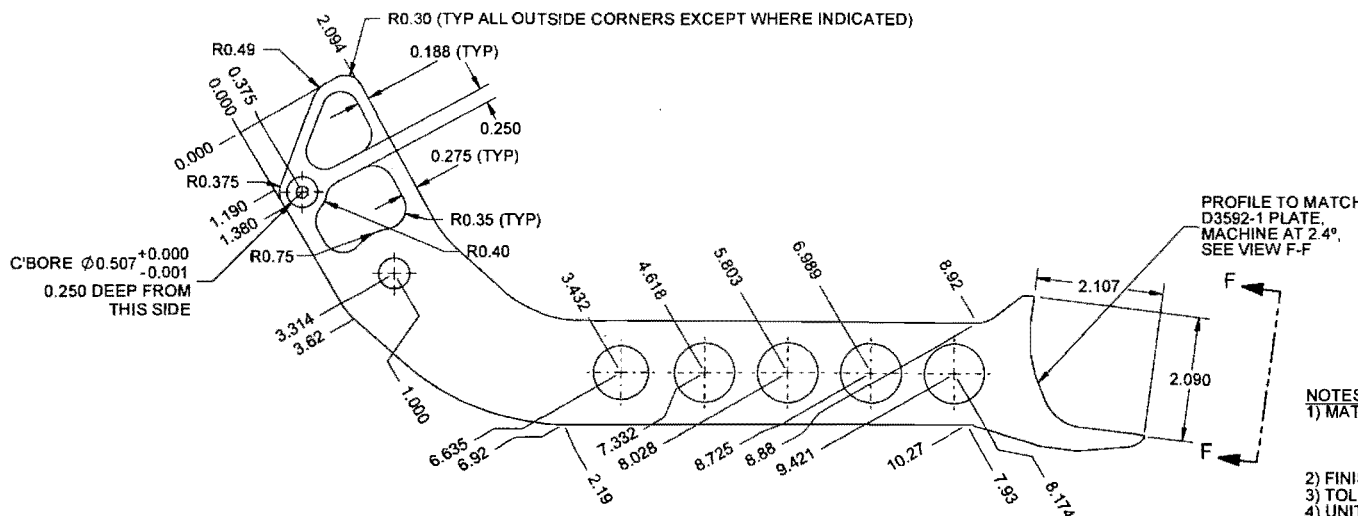
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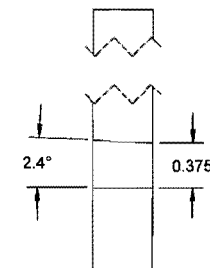
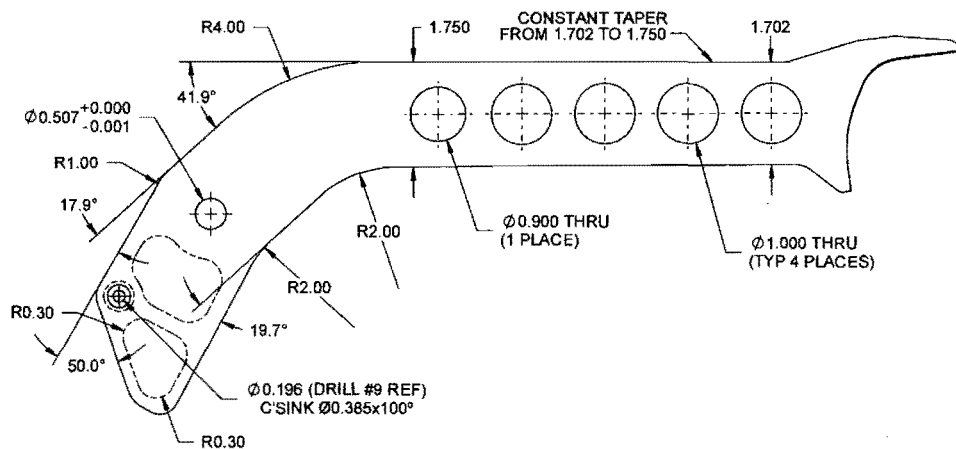
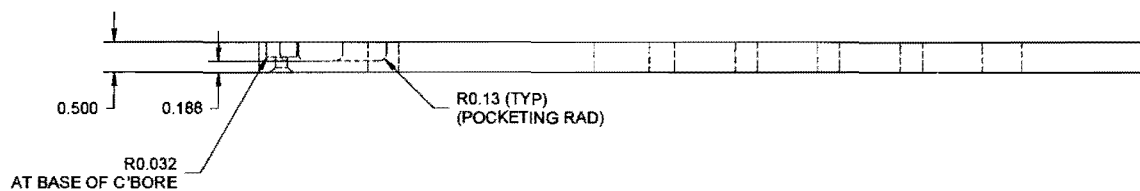
NOTE: Date & initial all entries



D3560-4 ARM

NOTES:

- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR, 0.500 THICK
PER AMS-QQ-A-225/B (OR AMS 4117/4128/4115/4116) OR
PER AMS-QQ-A-200/B (OR AMS 4160)
(REF. DART SPEC. M6061T6B0.500)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.05 lbs



VIEW F-F
SCALE 1:1

RELEASED
2012-12-14

DESIGN		DART AEROSPACE LTD	
DRAWN	EC	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. D
MFG. APPR.		D3560	SHEET 5 OF 5
APPROVED		TITLE	SCALE
DE APPR.		ARM WELDMENT	1:2
DATE	07.11.16	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DRAWING IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE REPRODUCED OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

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